








# Diversity, equity, and inclusion in gastrointestinal endoscopy: European Society of Gastrointestinal Endoscopy Position Statement



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### STATEMENTS

1 The European Society of Gastrointestinal Endoscopy (ESGE) adheres to the overarching principles of equality of opportunity, fair treatment, nondiscrimination, and diversity of health care professionals.

2 ESGE strongly supports the creation of collaborations within and between national and international endoscopy societies to disseminate the principles of diversity, equality, and inclusion (DEI) in the field of gastrointestinal (GI) endoscopy.

3 ESGE aims to reflect the diversity of its membership in all its scientific and educational activities.

4 ESGE supports the fostering of collaborative work settings that empower all members of the endoscopy team to reach their full potential.

5 ESGE supports international and national endoscopy societies in promoting equitable access to high quality endoscopy training.

6 ESGE recommends the implementation of ergonomic principles in endoscopy units to prevent injuries and to provide adapted workplace conditions for personnel with disabilities and/or special needs.

7 ESGE recommends comprehensive mentorship, that includes diverse backgrounds, and equitable sponsorship for professional development, training, and academic excellence.

8 ESGE recommends that endoscopists actively identify, discuss, and attempt to accommodate reasonable patient preferences and expectations regarding endoscopy procedures.

9 ESGE advocates for educational and awareness campaigns targeting both health care professionals and patients, as well as the adoption of cost-effective health care strategies to address disparities and enhance equity in endoscopy care.

10 ESGE is committed to increasing support for underrepresented scholars and minorities pursuing research in endoscopy.

11 ESGE identifies mentorship and sponsorship as factors that may mitigate the barriers to academic careers for underrepresented endoscopy scholars.

12 ESGE recognizes the need to increase awareness of diversity, equity, and inclusion (DEI) in the field of endoscopy and supports publications on these topics.

## Introduction

The European Society of Gastrointestinal Endoscopy (ESGE) is committed to ensuring the adequate representation of all groups, including underrepresented persons and minorities, with the aim of promoting the basic principles of diversity, equity, and inclusion (DEI). DEI means that persons from different backgrounds, cultures, and beliefs are included and supported based on their individual needs [1]. DEI has been shown to improve the satisfaction, efficiency, and productivity of companies and organizations [2–4].

ESGE comprises 42 member societies with over 4300 individual members. In a survey conducted in 2022, ESGE identified possible age and sex disparities within the Society, especially with regard to involvement in Society guidelines and curricula and conference faculty membership. In particular, the survey revealed a male predominance in faculty activities (77% male), grant recipients (68% male), and guideline authorship (83% male). Before 2023, there was no female representation on the ESGE executive committee and women comprised only 15% of the ESGE governing board.

To address these issues, the Diversity, Equity, and Inclusion (DEI) Working Group of ESGE was established in 2021 to identify avenues to improve DEI within ESGE. This has included establishing a mentoring program, a talent bank, and production of the present Position Statement. The mentoring program was established to improve the access of underrepresented groups to experts, role models, and expert endoscopy centers, while the talent bank aims to enrich the diversity of individual members eligible for specific tasks within the Society.

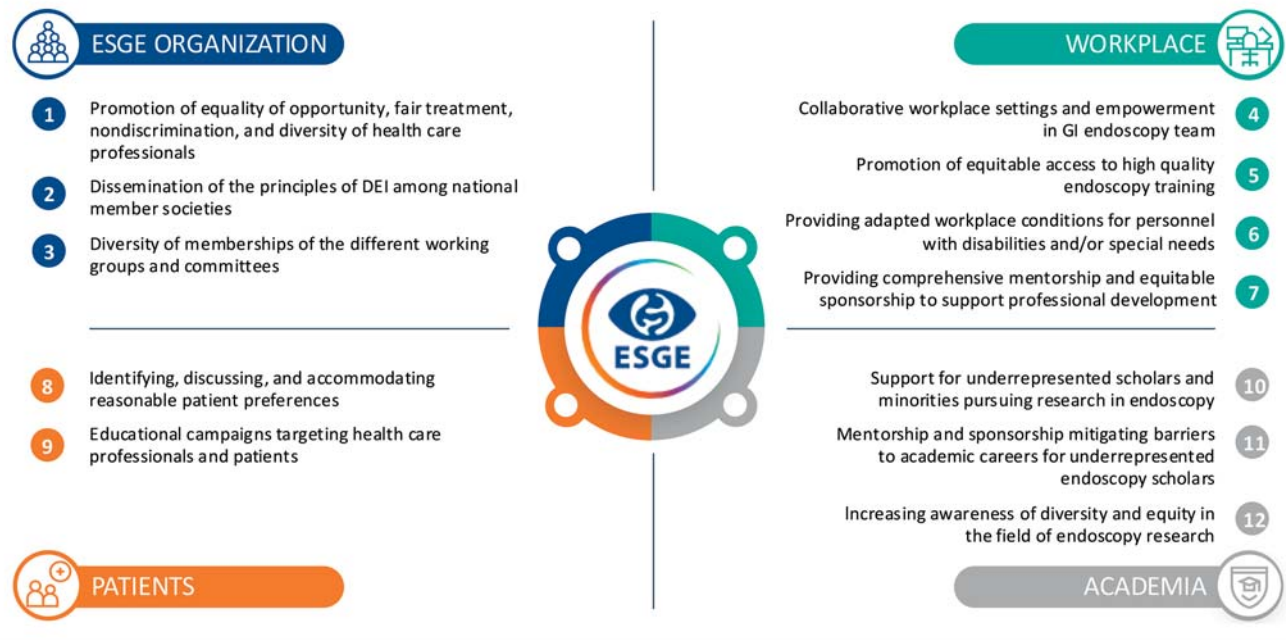
In this Position Statement, ESGE addresses the most important principles of DEI as related to endoscopic practice (► **Fig. 1**) in order to increase awareness and offer guidance on this important topic.

## Methods

ESGE commissioned this Position Statement in accordance with the current ESGE Publications Policy [5]. The DEI Working Group chair (M.P.) developed the framework and created six individual task forces (see Supplementary material, online-

## ESGE's commitment to Diversity, Equity & Inclusion (DEI)

The European Society of Gastrointestinal Endoscopy aims to apply these 12 principles within ESGE, at the workplace, with patients, and in academia



► Fig. 1 Diversity, equity and inclusion: ESGE's 12 statements.

only). A core group was ultimately established to finalize these statements.

The data analysis and results described above informed the activities of the DEI Working Group and the development of this Position Statement. A series of key questions were developed and discussed at an initial meeting (held during UEGW, October 2022). Questions were amended and allocated to task force members. Statements were submitted by task force leaders for further meetings and discussions (at ESGE Days April 2023, online June 2023, UEGW October 2023, and online December 2023). A final meeting was held in April 2024 during ESGE Days at which time the statements were finalized.

Each statement was reviewed through the above series of meetings. Where there was disagreement amongst the task force members, the statement was amended prior to repeat discussion and ratification at the final meeting.

The steps in the methodology are summarized below:

1. Establishment of a working group specifically addressing DEI within ESGE
2. Creation of task forces for creating the key points of the Position Statement
3. Comprehensive literature review and, whenever possible, gathering of evidence
4. Drafting of statements and internal peer review within the DEI Working Group
5. Approval by the ESGE Executive.

## DEI and ESGE

### STATEMENT 1

ESGE adheres to the overarching principles of equality of opportunity, fair treatment, nondiscrimination, and diversity of health care professionals.

Increasing diversity across all organizational layers remains a priority for ESGE. Although ESGE understands that many workplace aspects are beyond its influence, we believe that extensive efforts should be made to present equal opportunities to all of our members. An important step toward this goal was made with the creation of the ESGE Diversity, Equity, and Inclusion Working Group (DEI WG) in 2021. The existence of such working groups has been shown to help to promote social accountability within an organization by, for example, considering a diverse group of applicants for leadership positions [6]. Working groups can help to prevent organizations from resorting to quick fixes and temporary solutions without fundamental shifts in approaches or mindsets, but rather to ensure more meaningful and enduring undertakings that foster genuine engagement and interaction between the organization and minority groups [7]. Through the actions of the ESGE DEI WG, we encourage all of our members, member societies, and connected groups to adhere to these important DEI principles.

## STATEMENT 2

ESGE strongly supports the creation of collaborations within and between national and international endoscopy societies to disseminate the principles of diversity, equity, and inclusion (DEI) in the field of GI endoscopy.

DEI WG members should be present throughout the Society and at all Society meetings to bring to the attention of all decision-making groups the principles of equality of opportunity in order to increase the diversity of the ESGE. In particular, special attention should be given to these principles during the composition phase of governing boards, committees and working groups.

Multiple incentives and programs can be used to increase fairness and diverse representation, such as those used by medical societies in the United States to promote gender equality [8]. Specific interest groups such as “Women in Endoscopy” are crucial to create self-awareness, but it is important to recognize that not all minority groups are represented by a specific interest group, and also that fragmentation into smaller groups could reduce the impact of each individual group.

Collaboration between international and national endoscopy societies can facilitate fairness and diverse representation by, for example, disseminating surveys to collect and trace diversity metrics, facilitating the implementation of diversity policy recommendations within member societies, and by designing inclusive mentoring programs aimed at enhancing different types of role models [9].

## STATEMENT 3

ESGE aims to reflect the diversity of its membership in all its scientific and educational activities.

The formation of the ESGE DEI WG is a starting point, but is not sufficient to implement DEI principles. Diversity needs to be actively promoted in professional societies via an action plan, a measurement plan for implementation, and regular re-evaluation. The action plan includes ways to engage underrepresented groups within the Society, increase contact between these groups and the Society leadership, and improve social accountability for all committees/working groups. A core ESGE mission is to support and advance equal opportunities and equity whenever and wherever achievable. We are strongly committed to conveying mindsets to our ESGE members and national societies that potentiate actions that help to promote diversity. As a first step, in order to improve the gender balance among board candidates, ESGE has recently approved separate lists for men and women. In addition, a diversity talent bank has been established to increase the pool of highly qualified candidates for different roles within the society.

The use of diversity metrics is crucial to assess and monitor the state of diverse representation over time, thus measuring progress and helping to identify unmet needs. While aspects such as age, sex, race, and country of origin are measurable, diversity also encompasses other cultural dimensions that are not easily quantifiable. A significant constraint in measuring these metrics pertains to member privacy and privacy laws. In particular, highly personal factors such as sexual orientation and physical limitations may be private, yet influential in workplace biases. Recognition of intersectionality is vital, necessitating a variety of metrics for a comprehensive view. Above all, the utility of these metrics lies in their ability to chart progress toward societal goals. Metrics showcasing a return on investment at an institutional level can engage stakeholders, reinforce leadership commitment, secure additional resources, and advocate for further change.

ESGE has started to apply diversity metrics for its committees, working groups, guideline authors, committee chairs, and executive and governing board. The same metrics will be implemented for faculty and chair positions in ESGE Days as well as for participants in various other educational activities. By comparing the metrics from general members with those for leadership positions, ESGE will obtain data on how accurately its governing or representational functions reflect the Society's membership. For example, the percentage of female committee members should broadly match the percentage of female ESGE members to ensure equitable representation. Individuals specially focused on raising awareness and promoting diversity and talent banking initiatives can boost the inclusion of underrepresented groups. When considering recruitment options that promote diversity, open calls for committees, working groups, and guideline groups will improve the opportunities for more people to be included in the Society. Special attention will be given to the diversity metrics of fellowship grant recipients to ensure equal access to these early career opportunities. Regional representation will also be taken into account in all of the abovementioned initiatives to ensure all ESGE member societies benefit equally from ESGE activities. When the goals for inclusive leadership are not met, identification of potential barriers through focus groups or surveys can provide insight into factors influencing inclusion.

## DEI during GI endoscopy training and professional activities

### STATEMENT 4

ESGE supports the fostering of collaborative work settings that empower all members of the endoscopy team to reach their full potential.

A growing number of academic medical centers are recognizing the significance of DEI, acknowledging its integral role in institutional success alongside clinical activities, research, and educational programs. Promotion of a collaborative work

setting has several advantages. Fostering a diverse workplace setting can increase creativity and innovation because challenges are approached from different angles and backgrounds. Diversity is beneficial for collective problem-solving, and this effect is most pronounced for more complex problems [10]. Exclusion of diverse groups from equal participation in a health care system reduces the wealth of perspectives, knowledge, experiences, and ideas, thereby diminishing its competence in addressing health care needs.

Increased inclusivity for every member of the workplace setting (nursing staff, students, residents, fellows, and medical staff), irrespective of social position or group identity, is likely to increase engagement at work and talent discovery, which would ultimately boost job satisfaction and productivity [6]. Moreover, DEI can improve patient satisfaction, for example in instances where a diverse team of health care providers is better equipped to understand the religious, cultural, and ethnic attributes of patients (see Statement 9).

Conversely, a lack of diversity can undermine the abovementioned benefits. Studies have consistently shown that even though women comprise the majority of health care workers, their access to management, leadership, and governing positions remains limited [2]. In the context of medical specialties, gender underrepresentation is particularly evident in interventional disciplines. Within gastroenterology, this lack of diversity has been reported in numerous studies [11–13]. In the United States, although women constitute approximately half of all medical students, they represent just 30% of gastroenterology trainees and less than 15% of practicing gastroenterologists [14]. Their participation in educational activities, such as national congresses, is also markedly lower compared with their male counterparts (14% vs. 36%). Moreover, even though female GI trainees show a higher propensity for pursuing academic positions after training than male trainees (40% vs. 25%), they are often confined to lower academic ranks [14]. Leadership roles in GI departments are dominated by men, and a gender-based pay gap remains even after adjusting for practice setting, work hours, practice ownership, private free endoscopy center practice, and vacation time in private practice [15, 16]. Similarly, European data show a lack of women in advanced GI endoscopy roles [17]. Data on other underrepresented minorities are scarcer. However, this lack of diversity extends beyond gender, because individuals from racial and ethnic minorities also face barriers in gastroenterology and hepatology training programs and professional practice [11].

Because bias is often implicit or unconscious, one way by which collaborative workplace settings can be encouraged is through an active, open discussion of DEI principles within the workplace setting. A notable example of implicit bias is the evidence suggesting that medical professionals tend to underestimate the symptoms of Black patients compared to their White counterparts facing the same medical condition [18, 19]. Within the context of endoscopy, marginalized or stigmatized groups may encounter obstacles when seeking endoscopic procedures, primarily due to physician bias about their health care requirements. Furthermore, bias extends to the education and training of endoscopy professionals. Bias can

unconsciously shape the selection of trainees, where endoscopy trainers tend to look for someone like themselves [20]. In teams lacking diversity, unacknowledged biases can affect how members contribute, share insights, and engage in decision-making processes. Moreover, implicit bias can lead to unequal and improper treatment, misdiagnosis, and health disparity, highlighting the urgent need for awareness, education, and interventions to mitigate its effects within the medical community [21–23].

#### STATEMENT 5

ESGE supports international and national endoscopy societies in promoting equitable access to high quality endoscopy training.

**Basic GI endoscopy training** is the cornerstone of high quality endoscopic practice and should be accessible to all trainees within the context of formally structured training programs across medical education systems. While guiding principles have been put forward by professional societies, there is wide variation in national and local practices with regard to training in basic GI endoscopy [24, 25].

Most gastroenterology curricula mandate the acquisition of basic GI endoscopy skills during residency training [26]. Some health care systems permit physicians and non-physician health care personnel (i.e., endoscopy nurses, technicians) to train in and perform limited endoscopic procedures. However, the focus of gastroenterology/endoscopy training programs is on endoscopy competence and how it can be achieved [27, 28], while little attention is paid to who can be trained or how to ensure equitable access to endoscopy training.

Although there are no direct data, equality of opportunity in GI endoscopy training is probably limited by local training program capacity, trainer availability, access to simulator-based training, and additional nonendoscopy duties during fellowship training (i.e., ward duty, outpatient clinics, and administration) [26].

Because most centers lack access to simulator-based endoscopy training, fellows typically start endoscopy training in actual patients. Reluctance to involve a trainee in a procedure, both from the patient and from the supervisor, may lead to restricted access during the initial stages of training [24]. In this phase, unconscious bias (e.g. toward technical skills and gender) may also lead to inequity in endoscopy training opportunities [29].

The lack of formally structured training programs guaranteeing a pathway to competence is an important factor that hinders the equitable access of trainees to high quality training in a properly equipped endoscopy unit. Surveys across Europe indicate that many fellows do not reach the required number of endoscopic procedures recommended by their respective curricula and that there is an unmet need for qualified endoscopy trainers and for more hands-on procedures [24, 25, 30–33]. Most training programs in endoscopy are also not

adapted to flexible working schemes, which is detrimental to trainees with competing family obligations such as child-raising. In one study, trainees who worked more flexible hours were more often female and were less likely to obtain their colonoscopy certification or needed more time to do so [34].

**Advanced endoscopy training** (e.g., ERCP, EUS, third-space) is a fast-expanding field; however there are currently large geographical differences in exposure to these advanced procedures during basic endoscopy training.

National gastroenterology/endoscopy societies should ensure that trainees have access and exposure to these advanced endoscopy procedures during their basic endoscopy training. This should be done in a local endoscopy unit where a sufficient number of advanced endoscopy procedures are performed to ensure that the trainee understands the indications and quality indicators of these procedures [35].

With respect to DEI, a number of potential obstacles for choosing advanced endoscopy as a subspecialty within gastroenterology have been identified. Data from the United States indicate that the choice of subspecialty is primarily driven by the interest of the trainee [29]. This accounts for advanced endoscopy as well, where trainees have a preference for technical procedures. However, there are also a number of discouraging factors. In particular, female trainees can experience gender-specific obstacles that make them reluctant to pursue a career in advanced endoscopy [29, 36]. On a personal level, it is perceived that it is difficult to combine training in advanced endoscopy, including radiation exposure, with family planning [29, 36]. At a career level, there is a lack of gender-similar mentors and role models and of gender-adjusted ergonomic endoscopy equipment, and in some countries, there remains a financial reimbursement gender gap [15]. In general, there is a perception of patriarchy by female trainees in the field of advanced endoscopy [36]. Women may fear gender bias in fellowship and job application processes, as well as gender-based harassment in the workplace. Unconscious bias may cause male trainers to look for someone like themselves when assigning training lists, thus relegating female trainees to more administrative work. The same might be happening to other minorities based on race, ethnicity or country of origin, although this information has not been collected.

#### STATEMENT 6

ESGE recommends the implementation of ergonomic principles in endoscopy units to prevent injuries and to provide adapted workplace conditions for personnel with disabilities and/or special needs.

Health care personnel providing endoscopic services are routinely exposed to infection hazards and cumulative radiation and are prone to mechanical endoscopy-related injuries [37–40]. Such musculoskeletal injuries are related to repetitive movements, often in nonergonomic positions, and standing for extended periods of time. With the advances in the field of

endoscopy and the development of more complex procedures, endoscopy-related injuries are an increasing and relevant concern.

Data show that between 40% and 89% of gastroenterologists experience endoscopy-related injuries [37–39]. This can lead to unwanted caseload reduction and absence from work. Interestingly, data on gender differences and endoscopy-related injuries are controversial. A recent study showed that the incidence of endoscopy-related injuries is equally distributed between male and female endoscopists [41]. However, differences in the location of the injury and the suspected underlying mechanism suggest that gender may play a role in these injuries. Male endoscopists relate their injuries to wearing a lead apron and repetitive use of the duodenoscope elevator. In contrast, female endoscopists report the nonergonomic hand/body position to be a major underlying factor for their injuries. Unfortunately, a large number of endoscopists (~40%) have had no training in ergonomic principles [42]. Another European study suggested that women are more prone to endoscopy-related injury [43]. However, in only a minority of cases do these injuries lead to adjustments in endoscopy practice or the implementation of ergonomic principles. In particular, when fellows experienced endoscopy-related injuries, no action was undertaken in the endoscopy units [44].

Therefore, it seems incumbent upon endoscopy units to promote and implement ergonomic principles. Endoscopists may fear stigmatization when they experience an endoscopy-related injury and such injuries might therefore be underreported. However, these injuries are related to the poor ergonomic design of endoscopes and not the physical shortcomings of the endoscopist [45]. In particular, in a study from the United States, women considered their hands too small for optimal scope handling and manipulation [46]. Endoscope design, essentially unchanged for many decades, needs to be addressed by endoscope manufacturers. Other ergonomic principles in endoscopy are more easily implemented, such as adjustable chairs and beds, posture education, use of lead aprons that effectively distribute load, and ergonomic room design with correct positioning of an adjustable video monitor [45].

Some endoscopists are at particular risk for injuries, including pregnant women and those with disabilities. Pregnant women appear to be more prone to musculoskeletal injuries. Almost 80% of female endoscopists report new-onset endoscopy-related injury or a worsening of pre-existing injuries during their pregnancy [41]. Moreover, current or future planned pregnancy as well as the use of fluoroscopy in ERCP is a major concern for women and can deter them from choosing a career in advanced endoscopy [29, 36, 41].

For an endoscopist with disabilities, there is no general advice on ergonomics. If their disability does not preclude them from performing endoscopy, it is recommended to put in place individual ergonomic measures that enable them to carry out endoscopy in a safe and durable fashion. Since these measures should be highly individualized, it is difficult to formulate a universal recommendation. The use of adjustable chairs and beds and an ergonomic room design are minimal conditions to support personnel with disabilities.

**STATEMENT 7**

ESGE recommends comprehensive mentorship, that includes diverse backgrounds, and equitable sponsorship for professional development, training, and academic excellence.

Medicine has always been based on apprenticeship and supervised stepwise professional development. One essential tool for boosting the professional and personal development of physicians early in their career is high quality mentorship [47]. The mainstay of mentorship is the establishment of an effective mentor–mentee relationship and the provision of appropriate activities to encourage the mentee’s multi-directional development. More specifically, mentoring should provide guidance in clinical medicine and/or research, create opportunities for productivity, ensure sponsorship, and provide advice on personal choices when needed [48].

Given the various disparities in GI training, particularly in endoscopy, mentorship must cultivate diversity and inclusiveness and provide equitable training [49]. For example, a lack of gender-similar mentors and role models is a limiting factor when women consider training in advanced endoscopy [29].

Mentorship should be defined first and foremost by a mentoring program framework with an established mentor–mentee relationship. Because faculty members at academic medical centers may demonstrate implicit bias, as in the general population, mentors should be appropriately selected and trained to create a nonbiased mentoring environment [50]. However, data from the United States show that there remains a large gender gap in gastroenterology departmental leadership positions [51]. In 2015, the vast majority of gastroenterology division chiefs (93%) and program directors (71%) were male. Interestingly, the program director was more likely to be female if the division chief was also female.

An optimal matching process is critical for an effective relationship between mentor and mentee. An active search for mentees from minority backgrounds and a reliable and fair recruitment process [52] can overcome the current imbalance. If the mentee’s goals are purely professional, mentors do not necessarily need to have the same cultural, ethnic, or racial origin as mentees. However, expanded cultural competency training seems important to facilitate the open and respectful communication crucial for relationship enhancement and goal-setting [52]. Furthermore, these goals should achieve tangible results, be periodically checked, and be accompanied by mutual feedback.

Finally, sponsorship, as an additional element to mentorship, is important to a mentee’s development. A sponsor has a more active role than a mentor. A sponsor helps to create opportunities and deliver tools to enhance career progress (e.g. facilitating access to endoscopy courses, supporting participation in endoscopy fellowships and scholarly meetings, and helping trainees to obtain research grants) [53]. Sponsorship can be difficult to access as sponsors may select candidates

arbitrarily, without established regulation, which could negatively impact diversity and inclusion [54].

Overall, mentorship can be used to promote equitable training by establishing a clear framework of the enrollment process with a broad perspective and extensive and inclusive candidate search, personalized mentor–mentee relationships, genuine support in achieving goals, and the offering of equal sponsorship opportunities to all.

**DEI and the patient’s perspective****STATEMENT 8**

ESGE recommends that endoscopists actively identify, discuss, and attempt to accommodate reasonable patient preferences and expectations regarding endoscopy procedures

The patient–physician relationship remains the cornerstone of high quality health care and is a complex psychosocial interplay of vulnerability, trust, and authority in a professional setting. Endoscopists can increase patient participation by respecting patients’ individuality and helping to narrow information and knowledge gaps [55], thereby shifting power to the patient who takes a larger degree of control and responsibility [56]. Patient education brochures describing endoscopy procedures, telephone-based educational programs [57], videos, and smartphone apps can provide appropriate information in accessible formats [58]. Endoscopy services must be able to provide language interpreters who can explain endoscopy procedures to the patient in a language and manner that they can fully understand [59,60].

Some patients may have strong preferences or unrealistic expectations that should be identified and discussed openly before the endoscopic procedure to ensure adherence, improve patient satisfaction with the outcome of the procedure, and prevent litigation. Whenever possible, the endoscopy team should try to accommodate reasonable requests regarding endoscopic procedures, such as:

- Gender preference: due to personal or cultural issues, some patients prefer a gender-concordant endoscopist [61–63]. Multiple studies have shown that many patients have a strong preference for the gender of their colonoscopy provider, mainly due to embarrassment [64]. Indeed, 45% of women and 21% of men patients have a gender preference, mostly for gender concordance. Moreover, 34%–90% of patients with a gender preference were willing to postpone their colonoscopy in order to obtain gender concordance.
- Scheduling issues: single parents can face specific issues, such as those related to childcare or school drop-offs and the presence of a responsible adult at home after an endoscopic procedure involving sedation.
- Cultural and religious restrictions: it may be unacceptable to perform procedures during certain periods due to religious observance. Similarly, certain animal-derived products used

in endoscopic interventions (e.g. injectable succinylated gelatin) may be unacceptable to some patients while others may refuse blood transfusions that might be needed in the case of procedure-related bleeding. Although it is not always possible to find suitable alternatives [65–67], efforts to address these issues prior to the endoscopic procedure enhance patient experience and satisfaction.

#### STATEMENT 9

ESGE advocates for educational and awareness campaigns targeting both health care professionals and patients, as well as the adoption of cost-effective health care strategies to address disparities and enhance equity in endoscopy care.

The current era of open-access endoscopy and improved public awareness and medical education has increased both access to and demand for endoscopic procedures. However, possible disparities in the benefits of high quality endoscopy may stem from both patient and physician lack of information, poor design of the health care infrastructure and programs, and various socioeconomic issues. For example, the lower efficiency of colorectal cancer screening programs in certain ethnic groups has been traced to poor uptake of the program due to biases in how physicians recommend screening and fear and mistrust on the part of patients [67]. In addition, inappropriate referral to surgery where endoscopic treatment would be a suitable cost-effective alternative is an ongoing issue, even in top-rated health care systems [68]. Therefore, increasing education and awareness in both health care professionals as well as patient groups is essential to reduce inequity and improve overall outcomes.

This is an onerous task, and there are many factors that should be addressed. Misrepresentation of race in medical curricula (e.g. prevalence without context, race-based diagnostic heuristics) [20] and faulty aggregation of primary patient data (e.g. race and ethnicity [69]) in intake forms or endoscopy report notes are examples of how a lack of insight and implicit bias decrease the appropriateness of recommendations for screening or follow-up. The recent rise in publications concerning these topics, dedicated sessions in medical congresses, and the creation of working groups centered on DEI in health care should be matched by a critical reassessment of relevant issues from traditional preclinical and clinical curricula.

Professional medical societies should work together with other stakeholders in campaigns aimed at improving the quality of freely available information [70] on digestive endoscopy and its benefits. To raise the public level of knowledge, efforts must be made to provide simple, comprehensible, and convincing evidence-based information that can be easily accessed. This is an important step toward empowerment through patient-centered care and links together improved care experiences, self-management, and health-related outcomes [71–75].

Understanding and recognizing patients' attitudes toward their care is essential to assuage preprocedural anxiety, increase post-procedural awareness and satisfaction, and avoid procedures that can lead to unnecessary medical acts and affect patients' relationship with their health care providers [76]. When repeated procedures are anticipated (i.e. periodic screening, follow-up, re-interventions, or multistep procedures), a negative initial experience may reduce the willingness to return for further endoscopy and ultimately harm the patient [65].

Another way to increase the collaboration between patients and professionals is by supporting patient advocacy groups. These groups are important stakeholders in health care policies [77] and can influence public policy, provide high quality information, and educate the public by offering mainstream media the "end-user" perspective [78–80]. Due to their medical training and knowledge, endoscopists and professional endoscopy societies are uniquely suited to engage with patient advocacy groups as advisers and partners in order to advance patient empowerment through health care policies that are rational and relevant to the health care experience.

## DEI in academia and research

#### STATEMENT 10

ESGE is committed to increasing support for under-represented scholars and minorities pursuing research in endoscopy.

The principles of scientific research are congruent with universality and collaboration and are well served by the participation of researchers with diverse backgrounds and viewpoints. The concept of superdiversity with multiple overlapping variables (e.g. country of origin, migration experience, legal status, and cultural factors) that can impact an individual's outlook has been described [81]. The participation of underrepresented minorities in research studies may increase the generalizability of results and reduce bias in reported outcomes [82]. However, only a small percentage of gastroenterologists active in research (i.e. 9% of American academic gastroenterologists and 10% of faculty at different levels) identify as underrepresented, although there seems to be an upward trend [83,84]. The latter could be a sign of improvement as greater homogeneity in scientific research has been associated with publications in journals with lower impact factors and with fewer citations [85]. This could support the idea that diversity in research teams not only advances the objectivity of publications, but might also improve their visibility by reaching out to more varied groups of readers. However, despite ongoing efforts, there is still room for progress in ensuring equal access to research and academic careers in endoscopy. Indeed, a recent systematic review highlighted the presence of a gender gap in authorship in gastrointestinal journals, which was linked to the design and topic of the research [86].



In terms of access to an academic career, the existing literature shows the presence of inequalities and barriers, including those linked to racial and ethnic backgrounds, as well as gender. In the United States, only 3% of full-time academic faculty identified themselves as Black or Hispanic, and faculty members of underrepresented racial backgrounds were less likely than their White counterparts to achieve higher ranks in the academic pyramid, as well as tenured positions and research funding [87]. What is known as the “diversity–innovation paradox in science” describes these inequities in academic advancement: underrepresented minority groups, despite innovating at higher levels than their counterparts, have less successful careers and are less likely to receive academic recognition for their research contributions [88]. For example, in gastroenterology, although 10% of the members of the American Gastroenterology Association identify as belonging to underrepresented minorities, only 5% of speakers in Digestive Disease Week belong to these groups [89].

These inequities not only limit the possibility for an individual to achieve an academic career, but can also undermine the efforts of those who have obtained an academic position to advance to higher academic ranks. A recent review reported that female gastroenterologists in the United States pursue academic positions more often than their male colleagues (40% vs. 25%) but hold lower positions in the academic hierarchy [14]. These observations follow the general trend in academic medicine, irrespective of specialty, showing that the numbers of female associate and full professors are significantly lower than expected [90]. Factors possibly contributing to this unequal representation of women in higher academic positions in the United States could include the disparity in funding per grant of female researchers [91] and the unequal and unbalanced presence of female researchers as speakers at scientific meetings and conferences [92]. However, things appear to be changing, including within the field of gastroenterology, where policies to achieve a better balance of female representation at scientific meetings have been adopted [93].

#### STATEMENT 11

ESGE identifies mentorship and sponsorship as factors that may mitigate the barriers to academic careers for underrepresented endoscopy scholars.

In addition to their impact on specialization and training, mentorship and sponsorship play major roles in the pursuit of an academic career in medicine [94]. This can be problematic for various underrepresented groups [95]. For example, in a recent study [96] comparing more than 20 years of career experiences between male and female gastroenterologists in Canada, women were less likely to have had a mentor during training as compared with their male counterparts (2% vs. 13%). Moreover, 80% of women with no mentoring did not subspecialize. In addition, when women did have mentoring, they were more likely to have exclusively male mentors (61%

vs. 41%), whereas female-only mentoring was extremely rare, reported by 1% of men and 5% of women.

Sponsorship also plays a complementary role in accelerating career advancement through grants and scholarships to advanced research courses, where scholars will receive education on the basics of performing and publishing research [97]. For underrepresented groups, there are even more hurdles to overcome in this respect, including the documented lag in funding for female researchers and faculty members of underrepresented racial backgrounds from the US National Institutes of Health [87].

#### STATEMENT 12

ESGE recognizes the need to increase awareness of diversity, equity, and inclusion in the field of endoscopy and supports publications on these topics.

Equity in research has been a topic of discussion for some time. Previous publications have determined that less priority is given to the knowledge and perspectives of “less favored” groups, in addition to attributing less credibility to their experience [86]. Most such literature focuses on regional differences. Here, global inequities can influence publication success because of various factors, including article processing charges, biased credibility, or poor diversity in the composition of journal editorial boards. The gap due to these differences can be closed by measures such as diversifying journal editorial boards, providing article processing grants to authors from low-income countries, offering different article types, or broadening the scope of a journal [98–100]. This might also stimulate more publications on issues related to DEI, as a more diverse editorial board could be more concerned about and welcoming of these topics. This could additionally be supported by the creation of a special section in endoscopy-focused journals for publications related to DEI.

Another important aspect of research equity is the consideration of gender differences, which are often overlooked in research design, study implementation, and scientific reporting. This oversight limits the generalizability of research findings and their applicability to clinical practice, in particular for women but also for men. The Sex and Gender Equity in Research (SAGER) guidelines [23] are a comprehensive procedure for reporting of gender information in study design, data analyses, results, and interpretation of findings. They provide researchers and authors with a tool to standardize sex and gender reporting in scientific publications, designed to be flexible enough to accommodate a wide range of research areas and disciplines.

Finally, peer review is another topic that influences acceptance of publications regarding DEI and articles from diverse backgrounds. Currently, most peer review processes are single-blinded, where reviewers are aware of the authors’ identities, but authors are not aware of the reviewers’ identities. Double-blind evaluation has been proposed as a solution, but it can be

rather problematic to achieve, due to difficulties in detecting fraud or because true blinding of authorship is challenging, as experts acting as reviewers might be familiar with other researchers' work. Data from published studies are mixed [101–103], with some work suggesting more gender bias associated with the single-blind compared with the double-blind review process, whereas others find no difference between the two review options [102, 103]. A potential way forward in this field would be to identify and use peer reviewers familiar with diversity and equity concepts and, as mentioned previously, to promote publications regarding these issues. The effects of these actions could then be measured after they have been implemented.

## Disclaimer

The legal disclaimer for ESGE Guidelines [5] applies to this Position Statement.

## Competing interests

No competing interests have been declared by any author.

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